UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/965,772	09/27/2001	Tomio Amano	JP9-2000-0267US1 (590.083	3441

35195 7590 02/04/2008

FERENCE & ASSOCIATES LLC
409 BROAD STREET
PITTSBURGH, PA 15143

EXAMINER	
SINGH, RACHNA	

ART UNIT	PAPER NUMBER
2176	

MAIL DATE	DELIVERY MODE
02/04/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	09/965,772	AMANO, TOMIO	
	Examiner	Art Unit	
	Rachna Singh	2176	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 November 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2 and 4-23* is/are pending in the application.

4a) Of the above claim(s) *12-19* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2 and 4-23* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This action is responsive to: Response to Election/Restriction filed on 11/19/07.

2. Claims 1-2, 4-5, 6-11, and 20-23 have been elected. Claims 12-19 have been withdrawn from consideration.

Claim Rejections - 35 USC § 101

3. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. Claims 10-11 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Specifically, claims 10-11 are considered software per se. Computer programs may be explicitly claimed as, for example, a series of code or instructions for performing functions or may be implicitly claimed as, for example, a system, a module or an apparatus. Where there is no evidence in the specification that a means which may be interpreted as software, hardware or combinations thereof necessarily includes hardware, it will be interpreted in its broadest reasonable sense as a software means, which is the case here.

Thus a claim to functional descriptive material, including computer programs, per se, is not patent eligible subject matter. It should be noted that functional descriptive material claimed in combination with an appropriate computer readable medium to

enable the functionality to be realized is patent eligible subject matter if it is capable of producing a useful, concrete and tangible result when used in the computer system.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 1-2, 4-5, and 20-23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Specifically, the claims recite certain features using terminology that does not seem to be consistent with what is intended to be claimed. For example, in claims 1, 4, and 20-22, the term "re-input" in the phrase "incorrect character conversions that occur frequently during the re-input of text" is confusing. Furthermore the phrase "using a tag set to add rewritten information" is confusing and unclear. Terms such as "re-input" and "rewritten" do not fit with the language of the rest of the claim. Clarification and/or correction is required.

Claims 2, 5 and 23 are rejected under 35 U.S.C. 112 second paragraph for fully incorporating the deficiencies of their base claim from which they depend.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claims 1-2, 4-5, 6-11, and 20-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kantrowitz et al., US 6,618,697 B1, 09/09/03 (filed 05/14/99) in view of DeMont, US 5,920,878, 07/06/99.

Regarding claim 1, Kantrowitz teaches a method for correcting errors that occur in a word processing program, OCR program, or automatic handwriting recognition program which meets the preamble, ***an error correction support method for application data***. See columns 1-2.

Kantrowitz teaches preventing errors and incorrect character conversions that occur while inputting text in a word processing program used to write words and sentences by replacing the words using correction code which meets the portion of the limitation, ***prevent errors or incorrect character conversions that occur frequently during the re-input of text . . . used to write data or sentences.*** See columns 1, lines 40-67, column 2, lines 34-45, and columns 9-10.

Kantrowitz teaches rewriting information in the word processing application such that the errors and incorrect conversions are corrected using certain rules which meets the portion of the limitation, ***add rewritten information to a predetermined portion of said application data. . .in order that the number of said errors and incorrect character conversions occurring during re-input of text is reduced.***. See columns 1, lines 40-67, column 2, lines 34-45, and columns 9-10.

Kantrowitz does not explicitly teach defining a tag set to prevent errors or that the application data is written in a markup description language. DeMont discloses creating an electronic document using a markup language which meets the limitation, ***application data written in a markup description.*** See column 2, lines 58-67. DeMont teaches the characters in the document are converted to an ASCII string which are concatenated to form an 80-bit binary string then augmented with a error correcting code such as a Hamming code in order to increase the likelihood that the message can be recovered should it be edited by an infringer which meets the portion of the limitation, ***defining a tag set to prevent errors; using the tag set to add rewritten information***. See column 3, lines 55-67 and column 4, lines 19-26.

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Kantrowitz's correction of characters with DeMont's defining of a tag set to prevent errors because replacing the written information with an error correction coded tag helps reduce the amount of errors resulting from missing spaces, shifted spaces, confusable words, etc. and also allows a document to be recovered

should it be edited by someone else. See column 2, lines 34-45 of Kantrowitz and column 4, lines 19-26 of DeMont.

Regarding claim 2, Kantrowitz teaches preventing errors for characters having the same shape, a space, or a similar character. See column 2, lines 34-45 of Kantrowitz. Kantrowitz does not expressly state defining a tag set to prevent these errors. DeMont teaches the characters in the document are converted to an ASCII string which are concatenated to form an 80-bit binary string then augmented with a error correcting code such as a Hamming code in order to increase the likelihood that the message can be recovered should it be edited by an infringer which meets the portion of the limitation, ***defining a tag set***. See column 3, lines 55-67 and column 4, lines 19-26.

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Kantrowitz's correction of characters with DeMont's defining of a tag set to prevent errors because replacing the written information with an error correction coded tag helps reduce the amount of errors resulting from missing spaces, shifted spaces, confusable words, etc. and also allows a document to be recovered should it be edited by someone else.. See column 2, lines 34-45 of Kantrowitz and column 4, lines 19-26 of DeMont.

Regarding claim 4, Kantrowitz teaches a method for correcting errors that occur in a word processing program, OCR program, or automatic handwriting recognition

program which meets the preamble, ***an error correction support method for application data***. See columns 1-2.

Kantrowitz teaches selecting an entire document for error correction support which meets the limitation, ***selecting a text portion that needs error correction support***. See columns 1-2. Kantrowitz teaches preventing errors and incorrect character conversions that occur while inputting text in a word processing program used to write words and sentences by replacing the words using correction code which meets the portion of the limitation, ***said error correction related to errors comprising errors or incorrect character conversions that occur frequently during the re-input of text . . . used to write data or sentences.*** See columns 1, lines 40-67, column 2, lines 34-45, and columns 9-10.

Kantrowitz teaches rewriting information in the word processing application such that the errors and incorrect conversions are corrected using certain rules which meets the portion of the limitation, ***in order that the number of said errors or incorrect character conversions is ultimately reduced.***. See columns 1, lines 40-67, column 2, lines 34-45, and columns 9-10.

Kantrowitz does not explicitly teach writing correction code based on a predetermined algorithm or that the application data is written in a markup description language. DeMont discloses creating an electronic document using a markup language which meets the limitation, ***application data written in a markup description*** and ***enclosing text portion using predetermined tags.*** See column 2, lines 58-67. DeMont teaches the characters in the document are converted to an ASCII string which

are concatenated to form an 80-bit binary string then augmented with a error correcting code such as a Hamming code in order to increase the likelihood that the message can be recovered should it be edited by an infringer which meets the portion of the limitation, ***writing correction code based on a predetermined algorithm***. See column 3, lines 55-67 and column 4, lines 19-26.

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Kantrowitz's correction of characters with DeMont's defining of a tag set to prevent errors because replacing the written information with an error correction coded tag helps reduce the amount of errors resulting from missing spaces, shifted spaces, confusable words, etc. and also allows a document to be recovered should it be edited by someone else. See column 2, lines 34-45 of Kantrowitz and column 4, lines 19-26 of DeMont.

Regarding claim 5, Kantrowitz teaches rewriting information in the word processing application such that the errors and incorrect conversions that occur among characters that are similar, inserted spaces, etc are corrected using certain rules. See columns 1, lines 40-67, column 2, lines 34-67, and columns 9-10. Kantrowitz does not explicitly teach ***writing correcting code for a character string that represents an attribute value or name using a predetermined attribute for the description of an error code.*** DeMont discloses creating an electronic document using a markup language. See column 2, lines 58-67. DeMont teaches the characters in the document are converted to an ASCII string which are concatenated to form an 80-bit binary string

then augmented with a error correcting code such as a Hamming code in order to increase the likelihood that the message can be recovered should it be edited by an infringer which meets the portion of the limitations, ***writing said attribute types to said application data using a predetermined attribute for the description of an error code***. See column 3, lines 55-67 and column 4, lines 19-26.

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Kantrowitz's correction of characters with DeMont's defining of a tag set to prevent errors because replacing the written information with an error correction coded tag helps reduce the amount of errors resulting from missing spaces, shifted spaces, confusable words, etc. and also allows a document to be recovered should it be edited by someone else. See column 2, lines 34-45 of Kantrowitz and column 4, lines 19-26 of DeMont.

Regarding claim 23, Kantrowitz does not teach removing correction code and tags and returning application data written in a markup language to its original form. However, DeMont teaches encoding a document with a plurality of tags from a markup language document where the document appears in its original form. See columns 4-5.

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Kantrowitz's correction of characters with DeMont's defining of a tag set to prevent errors because replacing the written information with an error correction coded tag helps reduce the amount of errors resulting from missing spaces, shifted spaces, confusable words, etc. and also allows a document to be recovered

should it be edited by someone else. See column 2, lines 34-45 of Kantrowitz and column 4, lines 19-26 of DeMont.

Regarding claim 6, Kantrowitz teaches a method for correcting errors that occur in a word processing program, OCR program, or automatic handwriting recognition program which meets the preamble, ***an error correction support method for application data***. See columns 1-2.

Kantrowitz teaches selecting an entire document for error correction support which meets the limitation, ***selecting character strings that require error correction support***. See columns 1-2. Kantrowitz teaches preventing errors and incorrect character conversions that occur while inputting text in a word processing program used to write words and sentences by replacing the words using correction code. See columns 1, lines 40-67, column 2, lines 34-45, and columns 9-10.

Kantrowitz teaches rewriting information in the word processing application such that the errors and incorrect conversions are corrected using certain rules which meets the portion of the limitation, ***in order that the number of selected character string errors is ultimately reduced.***. See columns 1, lines 40-67, column 2, lines 34-45, and columns 9-10.

Kantrowitz does not explicitly teach generating correction code based on a predetermined algorithm or that the application data is written in a markup description language. DeMont discloses creating an electronic document using a markup language which meets the limitation, ***application data written in a markup.*** See column 2, lines

58-67. DeMont teaches the characters in the document are converted to an ASCII string which are concatenated to form an 80-bit binary string then augmented with a error correcting code such as a Hamming code in order to increase the likelihood that the message can be recovered should it be edited by an infringer which meets the portion of the limitations, ***writing said error correction codes as nodes for said application data written in descriptive markup language and generating for said selected character strings, error correction codes that are based on a predetermined algorithm***. See column 3, lines 55-67 and column 4, lines 19-26.

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Kantrowitz's correction of characters with DeMont's defining of a tag set to prevent errors because replacing the written information with an error correction coded tag helps reduce the amount of errors resulting from missing spaces, shifted spaces, confusable words, etc. and also allows a document to be recovered should it be edited by someone else. See column 2, lines 34-45 of Kantrowitz and column 4, lines 19-26 of DeMont.

Regarding claim 7, Kantrowitz does not teach the error correction codes are generated for character strings and added after predetermined elements of application data have been written; however, DeMont teaches the characters in the document are converted to an ASCII string which are concatenated to form an 80-bit binary string then augmented with a error correcting code such as a Hamming code in order to increase

the likelihood that the message can be recovered should it be edited by an infringer which meets the portion of the limitations, ***generating error correction codes for all multiple character strings that are selected and added after predetermined elements of said application data have been written***. See column 3, lines 55-67 and column 4, lines 19-26.

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Kantrowitz's correction of characters with DeMont's defining of a tag set to prevent errors because replacing the written information with an error correction coded tag helps reduce the amount of errors resulting from missing spaces, shifted spaces, confusable words, etc. and also allows a document to be recovered should it be edited by someone else. See column 2, lines 34-45 of Kantrowitz and column 4, lines 19-26 of DeMont.

Regarding claim 8, Kantrowitz teaches a method for correcting errors that occur in a word processing program, OCR program, or automatic handwriting recognition program which meets the preamble, ***an error correction support method for application data***. See columns 1-2.

Kantrowitz teaches selecting an entire document for error correction support. See columns 1-2. Kantrowitz teaches preventing errors and incorrect character conversions that occur while inputting text in a word processing program used to write words and sentences by replacing the words using correction code. See columns 1, lines 40-67, column 2, lines 34-45, and columns 9-10. Kantrowitz teaches rewriting information in

the word processing application such that the errors and incorrect conversions that occur among characters that are similar, inserted spaces, etc are corrected using certain rules which meets the portion of the limitation, ***sorting, into predetermined attribute types, words in said application data that may constitute barriers in a context process***. See columns 1, lines 40-67, column 2, lines 34-67, and columns 9-10.

Kantrowitz does not explicitly teach ***writing attribute types using a predetermined tag set*** or ***the application data is written in a markup language.*** DeMont discloses creating an electronic document using a markup language which meets the limitation, ***application data written in a markup.*** See column 2, lines 58-67. DeMont teaches the characters in the document are converted to an ASCII string which are concatenated to form an 80-bit binary string then augmented with a error correcting code such as a Hamming code in order to increase the likelihood that the message can be recovered should it be edited by an infringer which meets the portion of the limitations, ***writing said attribute types to said application data using a predetermined tag set***. See column 3, lines 55-67 and column 4, lines 19-26.

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Kantrowitz's correction of characters with DeMont's defining of a tag set to prevent errors because replacing the written information with an error correction coded tag helps reduce the amount of errors resulting from missing spaces, shifted spaces, confusable words, etc. and also allows a document to be recovered

should it be edited by someone else. See column 2, lines 34-45 of Kantrowitz and column 4, lines 19-26 of DeMont.

Regarding claim 9, Kantrowitz eaches that one of the words that may constitute barriers in the context process may be a parts of speech which meets the limitation, ***said words are sorted into said predetermined attribute types and that may constitute barriers in said context process is at least one of a set comprising proper nouns, alphabetic abbreviations, tag names, keywords that appear as element values, attribute names, keywords that appear as attribute values.*** **See page 2, lines 34-67.**

Regarding claim 10, Kantrowitz teaches a method for correcting errors that occur in a word processing program, OCR program, or automatic handwriting recognition program which meets the preamble, ***an system for generating application data***. See columns 1-2.

Kantrowitz teaches selecting an entire document for error correction support. See columns 1-2. Kantrowitz teaches preventing errors and incorrect character conversions that occur while inputting text in a word processing program used to write words and sentences by replacing the words using correction code which meets the portion of the limitation, ***information used for replacing a predetermined portion of said application data.*** See columns 1, lines 40-67, column 2, lines 34-45, and columns 9-10. Kantrowitz teaches rewriting information in the word processing application such

that the errors and incorrect conversions are corrected using certain rules which meets the limitation, ***an outputter which outputs said application data with correction information***. See columns 1, lines 40-67, column 2, lines 34-45, and columns 9-10.

Kantrowitz does not explicitly teach ***a markup addition profile wherein information used to replace the portion of application data is replaced with tags*** or ***a markup addition module for adding to said application data said tags.*** DeMont discloses creating an electronic document using a markup language. See column 2, lines 58-67. DeMont teaches the characters in the document are converted to an ASCII string which are concatenated to form an 80-bit binary string then augmented with a error correcting code such as a Hamming code in order to increase the likelihood that the message can be recovered should it be edited by an infringer which meets the portion of the limitations, ***replacing a predetermined portion of said application data with tags and/or information for calculating error detection/correction code for said predetermined portion*** and ***adding to said application data, to generate application data using correction information, said tags and/or said error detection/correction code***. See column 3, lines 55-67 and column 4, lines 19-26.

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Kantrowitz's correction of characters with DeMont's defining of a tag set to prevent errors because replacing the written information with an error correction coded tag helps reduce the amount of errors resulting from missing spaces, shifted spaces, confusable words, etc. and also allows a document to be recovered

should it be edited by someone else. See column 2, lines 34-45 of Kantrowitz and column 4, lines 19-26 of DeMont.

Regarding claim 11, Kantrowitz does not teach a markup addition profile for inserting error correction code into said application data; however, DeMont teaches the characters in the document are converted to an ASCII string which are concatenated to form an 80-bit binary string then augmented with a error correcting code such as a Hamming code in order to increase the likelihood that the message can be recovered should it be edited by an infringer which meets the portion of the limitations, ***markup addition profile includes information used to insert said error detection/correction code into said application data***. See column 3, lines 55-67 and column 4, lines 19-26.

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Kantrowitz's correction of characters with DeMont's defining of a tag set to prevent errors because replacing the written information with an error correction coded tag helps reduce the amount of errors resulting from missing spaces, shifted spaces, confusable words, etc. and also allows a document to be recovered should it be edited by someone else. See column 2, lines 34-45 of Kantrowitz and column 4, lines 19-26 of DeMont.

With respect to claims 20-22, claims 20-22 are substantially similar to claim 1 and therefore are rejected under the same rationale used in claim 1 above.

Response to Arguments

9. Applicant elected claims 1-2, 4-5, 6-11, and 20-23. Applicant's arguments with respect to claims submitted previously have been considered but are moot in view of the new ground(s) of rejection presented above under 35 U.S.C. 103 (a).

Examiner notes new rejections under 35 U.S.C. 101 have been presented above with respect to non-statutory subject matter in claims 10-11.

Rejections under 35 U.S.C. 112, second paragraph have also been presented above. Examiner respectfully notes that the language of the claims as currently recited can be confusing and difficult to understand. Particularly, certain terms such as "re-input" and "rewritten" tend to be used where it does not seem suitable. Examiner believes some redrafting of the claims to better claim the invention would help further prosecution.

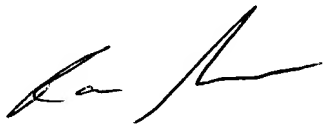
In view of the comments above, the rejections are maintained.

Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rachna Singh whose telephone number is 571-272-4099. The examiner can normally be reached on M-F (8:30AM-6:00PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Doug Hutton can be reached on 571-272-4137. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Rachna Singh
Primary Examiner
Art Unit 2176